WHAT IS CLAIMED IS:

1.   A remote maintenance repeater used in a remote monitoring system, wherein the remote monitoring system includes a plurality of internetwork connectors that respectively connect a network with another network and a

5   monitoring apparatus that monitors and remotely maintains the internetwork connectors, comprising:

a command receiving unit that receives a command from the monitoring apparatus;

a destination selecting unit that selects a transfer destination device to

10   which the command is to be transferred, wherein the transfer destination device is an internetwork connector or another remote maintenance repeater;

a command transmitting unit that transmits the command to the transfer destination device, at a specific frequency specific to the transfer destination device;

15   a result receiving unit that receives a result of execution of the command from the transfer destination device at the specific frequency; and

a result transmitting unit that transmits the result to the monitoring apparatus.

20   2.   The remote maintenance repeater according to claim 1, further comprising a substitute radio data relay unit that receives data from a specific internetwork connector by radio and transmits the data to another internetwork connector, upon occurrence of a malfunctioning in a network to which the internetwork connector is connected.

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3.   A remote maintenance repeater used in a remote monitoring system, wherein the remote monitoring system includes a plurality of internetwork connectors that respectively connect a network with another network and a monitoring apparatus that monitors and remotely maintains the internetwork

5 .   connectors, comprising:

a command receiving unit that receives a command from the monitoring apparatus;

an information obtaining unit that obtains an identification information for uniquely identifying a transfer destination device comprising an

10   internetwork connector or another remote maintenance repeater, to which the command is transferred;

a packet generating unit that generates a control packet including the identification information;

a radio command transmitting unit that transmits the control packet

15   and the command by radio at a predetermined frequency;

a radio result receiving unit that receives a result of execution of the command by radio; and

a result transmitting unit that transmits the result to the monitoring apparatus.

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4.   The remote maintenance repeater according to claim 3, further comprising a substitute radio data relay unit that receives data from a specific internetwork connector by radio and transmits the data to another internetwork connector, upon occurrence of a malfunctioning in a network to which the

25   internetwork connector is connected.

5.   An internetwork connector that connects a network with another network, comprising:

a radio command receiving unit that receives a command from a remote maintenance repeater by radio at a specific frequency specific to the

5   internetwork connector;

a command executing unit that executes the command; and

a radio result transmitting unit that transmits a result of execution to the remote maintenance repeater by radio at the specific frequency.

10   6.   The internetwork connector according to claim 5, further comprising a communication unit that transmits the command to an internetwork connector, which does not have a radio communication function, connected to the same network and receives the result of execution via the network.

15   7.   The internetwork connector according to claim 6, further comprising:

a malfunctioning detecting unit that detects a malfunctioning in a network to which the internetwork connector is connected;

a medium switching unit that switches a communication medium from the network to the radio based on the detection of malfunctioning;

20   a substitute data receiving unit that receives data from the remote maintenance repeater by radio; and

a substitute data transmitting unit that transmits the data to the remote maintenance repeater by radio.

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8.   An internetwork connector that connects a network with another network, comprising:

a radio command receiving unit that receives a control packet and a command from a remote maintenance repeater by radio at a predetermined

5   frequency;

a response judging unit that makes a judgment whether it is appropriate to respond to the remote maintenance repeater based on the identification information included in the control packet;

a responding unit that responds to the remote maintenance repeater

10   based on the judgment;

a command executing unit that executes the command; and

a radio result transmitting unit that transmits a result of execution by radio at the predetermined frequency.

15   9.   The internetwork connector according to claim 8, further comprising a communication unit that transmits the command to an internetwork connector, which does not have a radio communication function, connected to the same network and receives the result of execution via the network.

20   10.   The internetwork connector according to claim 9, further comprising:

a malfunctioning detecting unit that detects a malfunctioning in a network to which the internetwork connector is connected;

a medium switching unit that switches a communication medium from the network to the radio based on the detection of malfunctioning;

25   a substitute data receiving unit that receives data from the remote

maintenance repeater by radio; and

a substitute data transmitting unit that transmits the data to the remote maintenance repeater by radio.

5   11.   A remote maintenance repeating method for a remote monitoring system, wherein the remote monitoring system includes a plurality of internetwork connectors that respectively connect a network with another network and a monitoring apparatus that monitors and remotely maintains the internetwork connectors, comprising:

10   receiving a command from the monitoring apparatus;

selecting a transfer destination device comprising an internetwork connector or another remote maintenance repeater, to which the command is to be transferred;

transmitting the command to the transfer destination device by radio

15   at a specific frequency specific to the transfer destination device;

receiving a result of execution of the command from the transfer destination device by radio at the specific frequency; and

transmitting the result to the monitoring apparatus.

20   12.   A maintenance method for an internetwork connector that connects a network with another network, comprising:

receiving a command from a remote maintenance repeater by radio at a specific frequency specific to the internetwork connector;

executing the command; and

25   transmitting a result of execution to the remote maintenance repeater

by radio at the specific frequency.

13.   A computer program that realizes a remote maintenance repeating method for a remote monitoring system on a computer, wherein the remote

5   monitoring system includes a plurality of internetwork connectors that respectively connect a network with another network and a monitoring apparatus that monitors and remotely maintains the internetwork connectors, the computer program making the computer execute:

receiving a command from the monitoring apparatus;

10   selecting a transfer destination device comprising an internetwork connector or another remote maintenance repeater, to which the command is to be transferred;

transmitting the command to the transfer destination device by radio at a specific frequency specific to the transfer destination device;

15   receiving a result of execution of the command from the transfer destination device by radio at the specific frequency; and

transmitting the result to the monitoring apparatus.

14.   A computer program that realizes a maintenance method for an

20   internetwork connector that connects a network with another network on a computer, the computer program making the computer execute:

receiving a command from a remote maintenance repeater by radio at a specific frequency specific to the internetwork connector;

executing the command; and

25   transmitting a result of execution to the remote maintenance repeater

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by radio at the specific frequency.